

The remedies selected in the Bunker Hill Superfund Site’s Records of Decision are intended to be protective of human health and the environment, and to comply with federal, state and tribal standards that are applicable or relevant and appropriate (ARAR) or To Be Considered (TBC) for the Bunker Hill Superfund Site. Table 1-1 below lists those regulations and standards sorted by media that are either ARARs or TBCs for the Bunker Hill Site, and any new or revised standards since the last five-year review in 2000. A brief analysis of the new or revised standards is discussed in the Bunker Hill Five-Year Review Report (Sections 3.1.1, 4.1.1 and 5.2).

- Final June 1, 2005

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
I. Air					
A. Federal					
Clean Air Act National Ambient Air Quality Standards (NAAQS)	42 U.S.C. Section 7401 st seq; 40 CFR Part 50	Establishes ambient air quality standards for emissions of chemicals and particulate matter.	Emissions of particulates and chemicals that occur during remedial activities will meet the applicable NAAQS, which are as follows: Particulate Matter: 150 µg/m ³ 24-hour average concentration, 50 µg/m ³ annual arithmetic mean. Lead: 1.5 µg Pb/m ³ (0.5 µg Pb/m ³ is proposed)	1992 OU2 ROD	Applicable site wide.
Clean Air Act National Ambient Air Quality Standards (NAAQS)	42 U.S.C. Section 7401 st seq; 40 CFR Part 50	Establishes ambient air quality standards for emissions of chemicals and particulate matter.	Emissions of particulates and chemicals that occur during remedial activities will meet the applicable NAAQS, which are as follows: Particulate Matter: PM ₁₀ = 150 µg/m ³ 24-hour average concentration, 50 µg/m ³ annual arithmetic mean. PM _{2.5} = 65 µg/m ³ 24-hour average concentration, 15 µg/m ³ annual arithmetic mean. Lead: 1.5 µg Pb/m ³ Quarterly arithmetic mean	2000 OU2 5-Year Review	PM _{2.5} standards are not adopted by the site.
Clean Air Act National Ambient Air Quality Standards (NAAQS)	42 U.S.C. Section 7401 st seq; 40 CFR Part 50	Establishes ambient air quality standards for emissions of chemicals and particulate matter.	Emissions that occur during remedial activities will meet the current applicable NAAQS.	2001 OU2 Mine Water ROD.	Relevant and appropriate site-wide for disposal of sludge and construction activities conducted under the remedy.
Clean Air Act National Primary and Secondary Ambient Air Quality Standards (NAAQS)	40 CFR Part 50	Establishes requirements for control of fugitive dust.	Requires control of particulate emissions. NAAQS have been promulgated for fine and course particulates, and for lead.	2002 OU3 ROD	Relevant and appropriate to soil removal operations which may generate fugitive dust emissions. Note: OU3 is an interim action and does not establish final ARARs.
Airborne Contaminants and Fugitive Dust	Federal Clean Air Act (42 U.S.C. 7401 et seq.)	Minimizing airborne contaminants.	Provides valuable guideline with respect to minimizing the harmful effects of fugitive dust and airborne contaminants that result from excavation, construction, and other removal activities.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for disposal of sludge and construction activities conducted under the remedy.

¹ Changes to regulations noted in the OU2 ROD, the OU2 ROD 5-Yr Review, the OU2 ROD Amendment, the OU3 ROD, or the OU2 ESD are highlighted in yellow on this table.

² Reference is to ARARs citations in previous ROD documents as follows:
OU2 = OU2 ROD (1992)
5-Yr Rev = OU2 5-Year ROD Review (2000)
OU3 = OU3 ROD (2002)
ESD – Explanation of Significant Differences – OU2 (1998)

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Threshold Limit Values (TLVs)	Established by American Conference of Governmental Industrial Hygienists (ACGIH)	Release of airborne contaminants during remedial activities.	<p>TLVs are based on the time-weighted average (TWA) exposure to an airborne contaminant over an 8-hour work day or a 40-hour work week. Identify levels of airborne contaminants with which health risks may be associated. Since there are no ARARs for several of the contaminants of concern- arsenic, antimony, copper, cadmium, mercury, zinc- the TLVs should be considered ARARs for airborne emission of such chemicals. The TLVs for the contaminants of concern are as follows:</p> <p>Antimony = 500 µg/m3 Arsenic = 200 µg/m3 Cadmium = 50 µg/m3 Copper (fume) = 200 µg/m3 Copper (dust) = 1,000 µg/m3 Lead = 150 µg/m3 Mercury (alkyl) = 10 µg/m3 Mercury (except alkyl): Vapor = 50 µg/m3 Inorganic = 100 µg/m3 Zinc: ZnCl = 1,000 µg/m3 Zinc Oxide: Fume = 5,000 µg/m3 Dust = 10,000 µg/m3</p>	1992 OU2 ROD	Relevant and appropriate site-wide.
Threshold Limit Values (TLVs)	Established by American Conference of Governmental Industrial Hygienists (ACGIH)	Release of airborne contaminants during remedial activities.	<p>New values established: As = 10 µg/m3 (2003); Cd = 10 µg/m3 (1999); Pb = 50 µg/m3 (1999); Hg (vapor) = 25 µg/m3 (1994).</p>	New additions for As, Cd, Pb, Hg	
Estimated Limit Values (ELVs)	Established by American Conference of Governmental Industrial Hygienists (ACGIH)	Release of airborne contaminants during remedial activities.	<p>ELVs are based on Threshold Limit Values (TLVs) and converted to reflect exposure to contaminants on a 24 hour/day basis. The calculation of an ELV does not take into consideration the additive and synergistic effects of contaminants and additional exposures from media other than air. ELVs are not expected to be completely protective of the potential effects of exposures to contaminants; however, they do provide some indication of airborne contaminant levels at which adverse health effects could occur.</p> <p>Since there are no ARARs for several of the contaminants of concern- arsenic, antimony, copper, cadmium, mercury, zinc- the ELVs should be considered TBC for remedial activities which will cause airborne emission of such chemicals. The ELVs for the contaminants of concern are as follows:</p> <p>Mercury (alkyl) = 0.2 µg/m3 Mercury (except alkyl): Vapor = 1.0 µg/m3 Inorganic = 2.0 µg/m3 Zinc: ZnCl = 20.0 µg/m3 Zinc Oxide: Fume = 120 µg/m3 Dust = 200 µg/m3</p>	1992 OU2 ROD	Relevant and appropriate site-wide.

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Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
National Emissions Standards for Hazardous Air Pollutants	40 CFR §61	Establishes regulations governing management and disposal of asbestos.	Asbestos must be removed, managed, and disposed in accordance with specified standards.	1992 OU2 ROD	Applicable for Smelter Complex and Mine Operations Area (MOA).
B. State					
Idaho Air Toxics	IDAPA 16.01.1011, 01 [Changed numbering in 1993. See entry from 2001 OU2 ROD amendment]	Emission of air contaminants that are toxic to human health, animal life, or vegetation.	Emissions of air contaminants which occur during remedial activities will not be in such quantities or concentrations with other contaminants,. Injure or unreasonably affect human health, animal life, or vegetation.	1992 OU2 ROD	Applicable site-wide
Airborne Contaminants	Idaho Air Pollution Control Rules (IDAPA 58.01.01)	Minimizing airborne contaminants.	Remedial activities will be designed to take all reasonable precautions to prevent particulate matter from becoming airborne and may include the use of water or chemicals as dust suppressants, the covering of trucks, and the prompt removal and handling of excavated materials.	2001 OU2 Mine Water ROD Amendment	Applicable Site-wide for disposal of sludge, soil removal, and construction activities conducted under the remedy.
Idaho Ambient Air Quality Standards	Sections 39- 15 and 39-107, Idaho code. IDAPA 58.01.01.577	Establish ambient air quality standards for particulate matter, lead, and other constituents.	Acceptable ambient concentrations (AACs) for carcinogens and noncarcinogens are provided as 24-hr averages. Ambient air quality standards for particulates and lead are provided as annual and 24-hr averages.	2001 OU2 Mine Water ROD Amendment Idaho changed numbering system from "16s" to "58s" in 1993. Last revised on May 1, 1994.	Relevant and appropriate site-wide for disposal of sludge, and construction activities.
Idaho Toxic Air Pollutants	IDAPA 58.01.01, 585 and 586	Provides screening emission levels and acceptable ambient concentrations (AAC) for carcinogens and non-carcinogens.	Release of carcinogenic and non-carcinogenic contaminants must be estimated before start of construction, controlled if needed, and monitored during excavation and sorting of soil. Best Available Control Technology (BACT) required if emissions exceed acceptable ambient concentrations (AAC).	2002 OU3 ROD	Applicable to elements of the Selected Remedy, such as soil removal, having the potential for creating excessive air emissions. Note: OU3 is an interim action and does not establish final ARARs.
Washington Clean Air Act regulations	Ch. 173-400 WAC, Ch. 173-460 WAC	Acceptable source impact levels and regulation of fugitive emissions.	For remedial actions that could generate fugitive dust containing metals, the discharges from treatment units must meet acceptable source impact levels (ASILs) at the property boundary.	2002 OU3 ROD	Relevant and appropriate to remedial actions that could generate fugitive dust. Note: OU3 is an interim action and does not establish final ARARs.
II. Water					
A. Federal					
Safe Drinking Water Act	40 CFR §141	MCLs, MCLGs for arsenic, copper, lead, mercury, PCBs, selenium, silver, zinc, and nitrate.	Maximum permissible level of contaminant which may be delivered to user of public water system.	1992 OU2 ROD	Relevant and appropriate site-wide.
Safe Drinking Water Act – MCLs	40 CFR 141	Drinking water standards and Health Advisories published by the Office of Water, USEPA. Summer 2000. EPA 822-B-00-001	Arsenic = 0.05 mg/L (0.005 mg/L proposed) Copper (at tap) = 1.3 mg/L (Action Level) Lead (at tap) = 0.015 mg/L (Action Level) Mercury = 0.002 mg/L PCBs = 0.0005 mg/L Selenium = 0.05 mg/L Silver = -- Zinc = -- Nitrate = 10 mg/L	2000 OU2 5-Year Review	Potentially to be considered.

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Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Safe Drinking Water Act – MCLGs	40 CFR 141	Drinking water standards and Health Advisories published by the Office of Water, USEPA. Summer 2000. EPA 822-B-00-001	Arsenic = zero Copper (at tap) = 1.3 mg/L Lead (at tap) = zero Mercury = 0.002 mg/L PCBs = zero Selenium = 0.05 mg/L Silver = -- Zinc = -- Nitrate = 10 mg/L	2000 OU2 5-Year Review	Potentially to be considered.
B. State					
Idaho Drinking Water Regulations	IDAPA 58.01.08.050 (Safe Drinking Water Act, National Primary Drinking Water regulations, 42 USC §300f, 40 CFR Part 141)	Regulation of drinking water quality.	Require that contaminant concentrations in drinking water remain below MCLs and non-zero MCLs and MCLGs. By final rule effective February 22, 2002, EPA lowered the MCL for arsenic from 0.05 mg/L to 0.01 mg/L (66 FR 7061)	2002 OU3 ROD	Applicable to all public drinking water systems supplying residents of the Coeur d'Alene Basin. Relevant and appropriate to the provision of alternate water supplies, including the installation of new groundwater wells or treatment at the tap. Note: OU3 is an interim action and does not establish final ARARs.
Protection of Surface and Groundwater	Idaho Non-Point Source Management Plan (December 1999)	For possible non-point discharges to surface or groundwater.	Remedial activities will be consistent with the state's goal of restoration, maintenance, and protection of the beneficial uses of both surface water and groundwater. Long-term goals include design and implementation of best management practices for surface water and groundwater.	2001 OU2 Mine Water ROD Amendment	To be considered for site-wide remedial activities that could result in non-point discharges to surface of groundwater.
Protection of Surface and Groundwater	Idaho Non-Point Source Management Plan (December 1999)	For possible non-point discharges to surface or groundwater.	Remedial activities will be consistent with the state's goal of restoration, maintenance, and protection of the beneficial uses of both surface water and groundwater. Long-term goals include design and implementation of best management practices for surface water and groundwater.	2002 OU3 ROD	To be considered for remedial activities that disturb soils and sediments. Note: OU3 is an interim action and does not establish final ARARs.
II.A.1. Surface Water					
A. Federal					
Clean Water Act Section 304 – Federal Ambient Water Quality	66 Federal Register (FR) 18935-18936 (April 12, 2001)	Criteria for water quality.	Section 304(a)(1) of the CWA requires EPA to develop, publish, and revise criteria for water quality accurately reflecting the latest scientific knowledge. On April 12, 2001, the EPA notified the public of revised Ambient Water Quality Aquatic Life Criteria for cadmium.	2002 OU3 ROD	Revised criteria are relevant and appropriate to point source discharges to surface water, where those point sources are established as part of the selected remedial action. Note: OU3 is an interim action and does not establish final ARARs.
Clean Water Act (CWA)	Federal water quality criteria (FWQC) 40 CFR	Establishes acceptable contaminant levels for ingestion of aquatic organisms and for intake by aquatic organisms in surface water	FWQC for antimony, arsenic, beryllium, cadmium, copper, lead, zinc, mercury, and PCBs	1992 OU2 ROD	Applicable to onsite [point] source contributions only and South Fork Coeur d'Alene River tributaries onsite. (Not South Fork Coeur d'Alene River).

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Federal Water Quality Standards	40 CFR 131	Establishes acceptable contaminant levels. Also known as National Toxics Rule (NTR).	Acceptable contaminant levels for ingestion of aquatic organisms by people and for exposure of aquatic organisms in surface water.	2001 OU2 Mine Water ROD Amendment Idaho Water Quality Standards now enforced in the place of National Toxics Rule (NTR).	Relevant and appropriate for Central Treatment Plant (CTP) effluent where it discharges into Bunker Creek.
Clean Water Act	CWA-National Pollutant Discharge Elimination System (NPDES) 40 CFR §440	Discharges to waters of U.S. must meet standards established under NPDES program.	Treatment of water to meet new permit requirements.	1992 OU2 ROD	Relevant and appropriate to onsite surface, water services, Central Impoundment Area (CIA), wetland system.
Clean Water Act	CWA Section 402; NPDES	Establishes the NPDES permitting program	Requires that no pollutants be discharged to any surface water of the state from a point source, except as authorized by an individual or general permit.	2001 OU2 Mine Water ROD Amendment	Applicable to CTP effluent where it discharges into Bunker Creek.
NPDES Storm Water Discharge	40 CFR Part 122.26	Storm water discharge from site.	Establishes permitting process and discharge regulations for storm water.	1992 OU2 ROD	Relevant and appropriate site-wide for alternatives where mine material comes into contact with storm water or snowmelt.
NPDES Storm Water Discharge	40 CFR Part 122.26	Storm water discharge from site.	Section 402 of CWA establishes a comprehensive framework for addressing stormwater discharges under the NPDES program. Specifies requirements under 40 CFR 122.26 for point source discharge of stormwater from construction sites to surface water, and provides for BMPs such as erosion control for removal and management of sediments to prevent run-on and run-off.	2001 OU2 Mine Water Amendment	Applicable for any point source discharges of stormwater from remedial action construction areas to surface waters.
Storm Water	Clean Water Act (CWA) Storm Water Multi-Sector General Permit for Industrial Activities (65 CFR 64746-64880 and 40 CFR 122.26)	Regulating storm water discharge.	Regulations provide that discharges of storm water associated with “industrial activities” require a National Pollutant Discharge Elimination System (NPDES) permit. “Industrial activities” include inactive mining facilities, hazardous waste treatment units and RCRA Subtitle D landfills. BMPs must be used, and appropriate monitoring performed, to ensure that storm water runoff does not exceed state water quality standards.	2002 OU3 ROD	Substantive requirements are applicable to elements of the selected remedy that result in discharges of storm water, including constructing and operating mine waste repositories. Not ARAR for seepage or mine drainage. Note: OU3 is an interim action and does not establish final ARARs.
Waters In and Around the Site	Clean Water Act (Section 404) – Dredge or Fill Requirements; 33 U.S.C. 1251-1376, 40 CFR 230, 231`	Capping, dike stabilization, construction of berms and levees, and disposal of contaminated soil, waste material, or dredged material are examples of activities that may involve a discharge of dredged or fill material.	The four conditions that must be satisfied before dredge and fill is an allowable alternative are: -There must be no practical alternative. -Discharge of dredged or fill material must not cause a violation of State water quality standards, violate any applicable toxic effluent standards, jeopardize threatened or endangered species, or injure a marine sanctuary. -No discharge shall be permitted that will cause or contribute to significant degradation of the water. -Appropriate steps to minimize adverse effects must be taken. -Determine long- and short-term effects on physical, chemical, and biological components of the aquatic ecosystem.	1992 OU2 ROD	Applicable site-wide.

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Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Waters In and Around the Site	Clean Water Act (Section 404) – Dredge or Fill Requirements; 33 U.S.C. 1251-1376, 40 CFR 230	Discharge of dredged or fill material into waters of the United States.	Establishes requirements that limit the discharge of dredged or fill material into waters of the United States. EPA guidelines for discharge of dredged or fill materials specify consideration of alternatives that have less adverse impacts and prohibit discharges that would result in exceedance of surface water quality standards, exceedance of toxic effluent standards, and jeopardy of threatened or endangered species. Special consideration required for “special aquatic sites” defined to include wetlands. Portions of site encompass “waters of the United States”. Should also be considered as an action-specific ARAR.	2001 OU2 Mine Water Amendment	Applicable site-wide for construction activities including but not limited to road construction, treatment plant construction, and surface water diversions that could result in discharges to surface waters.
Disposal of Dredge Material	40 CFR Part 230 and 33 CFT Parts 320 to 330	Disposal of soil or dredge material	Must determine effects on the aquatic ecosystem, satisfy appropriate steps to minimize adverse impacts, prevent significant degradation of the water, and avoid violation of water quality standards.	2001 OU2 Mine Water Amendment	Applicable site-wide to any dredging and filling actions that occur as a result of implementing stream diversions under this remedy.
Dredge Material	Clean Water Act, Section 404 - Dredge or Fill Requirements (33 USC Section 1344, 33 CFR Parts 320 to 330, and 40 CFR Part 230)	Regulates disposal of dredge material.	Establishes requirements that limit the discharge of dredged or fill material into navigable waters and associated wetlands. Require consideration of alternatives that have less adverse impacts and prohibit discharges that would result in exceedance of surface water quality standards, exceedance of toxic effluent standards, and jeopardy of threatened or endangered species.	2002 OU3 ROD	Applicable to work in or near navigable waters. Substantive requirements of these regulations are applicable to elements of the selected remedy, such as stream bank stabilization, with potential to affect stream flows in the upper and lower basins. Special consideration required for “special aquatic sites” which are defined to include wetlands. Note: OU3 is an interim action and does not establish final ARARs
Wetlands Located In and Around the Site	Protection of Wetlands; Executive Order 11990; 40 CFR 6, Appendix A.	Remedial actions may affect wetlands.	The remedial action will be designed to avoid adversely impacting wetlands wherever possible, including minimizing wetlands destruction and preserving wetland values.	1992 OU2 ROD	Applicable to West Page Swamp and Smelterville Flats
Wetlands Located In and Around the Site	Protection of Wetlands; Executive Order 11990; 40 CFR 6.302(a); 40 CFR Part 6, Appendix A.	Remedial actions may affect wetlands.	Requires federal agencies to take action to avoid adversely affecting wetlands, to minimize wetlands destruction, and to preserve the value of wetlands.	2001 OU2 Mine Water ROD Amendment	While no wetlands have been identified by federal or state agencies in the project area, the Order is applicable site-wide if wetlands are identified that are impacted by remedial actions.
Protection of Wetlands	Executive Order 11990; 40 CFR 6.302(a); 40 CFR Part 6, Appendix A	Remedial actions that may affect wetlands	Require federal agencies to avoid adversely impacting wetlands, minimize wetland destruction, and preserve the value of wetlands.	2002 OU3 ROD	Applicable to remedial activities in wetlands. Note: OU3 is an interim action and does not establish final ARARs.
Wetlands Located In and Around the Site	Considering Wetlands at Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites, EPA Office of Solid Waste and Emergency Response (OSWER) 9280.03, 1994	Protection of wetlands.	Guidance for consideration of potential impacts of response actions on wetlands at CERCLA sites.	2002 OU3 ROD	To be considered. Note: OU3 is an interim action and does not establish final ARARs.
100-year Floodplain (Hazardous Waste)	Location Standard for Hazardous Waste Facilities – Resource Conservation and Recovery Act (RCRA); 42 U.S.C. 6901; 40 CFR 264.18(b)	RCRA hazardous waste treatment and disposal.	Facility located in a 100-year floodplain must be designed, constructed, operated and maintained to prevent washout during any 100-year/24-hour flood.	1992 OU2 ROD	Relevant and appropriate site-wide.

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Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
National Recommended Water Quality - Freshwater Quality Standards, Chronic	FR 63, No. 234, December 7, 1998. And FR 64 no. 77, April 22 1999.	Developed as guidance for states for the protection of human health and aquatic life. Based on National Toxics Rule (revised April 2000)	Recommended Freshwater Quality Standards, chronic, and human health criteria for consumption of organisms. Antimony = -- Arsenic = 0.15 mg/L Beryllium = -- Cadmium* = 0.0022 mg/L Copper* = 0.009 mg/L Lead* = 0.0025 mg/L Mercury = 0.00077 mg/L PCBs = 0.000014 mg/L Zinc* = 0.12 mg/L * Freshwater aquatic criteria for these metals are a function of hardness and water effect ratio. PCB criterion listed is for individual PCBs	2000 OU2 5-Year Review	Potentially to be considered.
National Recommended Water Quality – Human Health Criteria for Consumption of Organisms	FR 63, No. 234, December 7, 1998. And FR 64 no. 77, April 22 1999.	Developed as guidance for states for the protection of human health and aquatic life.	Recommended Freshwater Quality Standards, chronic, and human health criteria for consumption of organisms. Antimony = 4.3 mg/L Arsenic = 0.00014 mg/L Beryllium = -- Cadmium = -- Copper = 1.30 mg/L Lead = -- Mercury = 0.000051 mg/L PCBs = 0.00017 µg/L Zinc = 69 mg/L * Freshwater aquatic criteria for these metals are a function of hardness and water effect ratio. PCB criterion listed is for individual PCBs	2000 OU2 5-Year Review	Potentially to be considered.
National Recommended Water Quality Criteria	EPA 822 Z-99-001, April 1999. Revised December 7, 1998 (FR Vol. 63, No. 234) . Republished in April 1999.	Guidance for states for the protection of human health and aquatic life.	Federal criteria for 157 pollutants for protection of human health and aquatic life, developed as guidance for states.	2001 OU2 Mine Water ROD	Relevant and appropriate for CTP effluent where it discharges into Bunker Creek.
B. State					
Areas Adjacent to or in the Vicinity of State Waters	IDAPA Section 16.01.2800	Storage or disposal of hazardous or deleterious materials in the vicinity of, or adjacent to, state waters.	The remedial action will be designed with adequate measures and controls to ensure stored or disposed contaminated soils will not enter state waters as a result of high water, precipitation, runoff, wind, facility failure, accidents or third-party activities.	1992 OU2 ROD	Applicable
Activities Generating Non-point Discharges to Surface Waters	IDAPA Sections 16.01.2050, 06 and 16.01.2300,04 (renumbered to Idaho Water Quality Standards and Wastewater Treatment Requirements [IDAPA 58.01.02]), 1993	Construction and other activities which may lead to non-point source discharges to surface waters.	The remedial action will be designed to utilize best management practices or knowledgeable and reasonable efforts in construction activities to minimize adverse water quality impacts and provide full protection or maintenance of beneficial uses of surface water.	1992 OU2 ROD	Applicable (no location given)

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Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Idaho Quality Standards – Water Designated for Aquatic Life Use - Chronic Freshwater Criteria	IDAPA §§58.01.02.210	Establishes water quality standards.	<p>Idaho water quality standards incorporate toxic substance criteria set forth in 40 CFR 131.36(b)(1), as of July 1, 1993, with exception of arsenic, which is set at 50 µg/L.</p> <p>Freshwater quality standards and human health criteria for ingestion of organisms are incorporated by reference for waters designated for aquatic life use.</p> <p>Antimony = -- Arsenic = 0.05 mg/L Beryllium = -- Cadmium* = 0.011 mg/L Copper* = 0.012 mg/L Lead* = 0.0032 mg/L Mercury = 0.012 mg/L PCBs = 0.014 mg/L Selenium = -- Silver = -- Zinc* = 0.11 mg/L</p> <p>* Freshwater aquatic criteria for these metals are a function of hardness and water effect ratio. PCB criterion listed is for individual PCBs</p>	2000 OU2 5-Year Review	Determination deferred
Idaho Quality Standards – Water Designated for Recreation Use – Human Health Criteria for Ingestion of Organisms	IDAPA §§58.01.02.210	Establishes water quality standards.	<p>Idaho water quality standards incorporate toxic substance criteria set forth in 40 CFR 131.36(b)(1), as of July 1, 1993, with exception of arsenic, which is set at 50 µg/L.</p> <p>Human health criteria for ingestion of organisms are incorporated by reference for waters designated for recreation use. Water quality standards designated for aquatic life are incorporated by reference.</p> <p>Antimony = 4.3 mg/L Arsenic = 0.05 mg/L Beryllium = -- Cadmium = -- Copper = -- Lead = -- Mercury = 0.00015 mg/L PCBs = 0.000045 µg/L Selenium = -- Silver = -- Zinc = --</p> <p>* Freshwater aquatic criteria for these metals are a function of hardness and water effect ratio. PCB criterion listed is for individual PCBs</p>	2000 OU2 5-Year Review	Potentially to be considered.
Idaho Quality Standards	IDAPA §§58.01.02.210	Establishes water quality standards.	Standard for PCBs was revised May 3, 2003.	New	
Idaho Water Quality Standards and Wastewater Treatment Requirements	IDAPA §§58.01.02	Restrictions placed on the discharge of wastewater and on human activities that may adversely affect water quality in the waters of the state.	Requires protection of state waters for appropriate beneficial uses; establishes state water quality standards for bacteria, dissolved oxygen, pH, temperature, dissolved gas, and total ammonia. Establishes numeric criteria for toxic substances for the protection of human health and aquatic life. Incorporates by reference 40 CFR 131.36.	2000 OU2 5-Year Review	Applicable to onsite contributions only and South Fork Coeur d'Alene River tributaries onsite, including Government Gulch, and Milo and Bunker Creeks. (Not South Fork Coeur d'Alene River).

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Idaho Water Quality Standards and Wastewater Treatment Requirements	Idaho Water Quality Standards and Wastewater Treatment Requirements IDAPA §§58.01.02	Restrictions placed on the discharge of wastewater and on human activities that may adversely affect water quality in the waters of the state.	Designates uses for waters of the state and water quality standards protective of those uses. With the exception of arsenic, this regulation adopts the National Toxics Rule (40 CFR 131) for individual chemicals and other parameters based on protection of beneficial uses. Hazardous and deleterious materials must not be stored, disposed of, or accumulated adjacent to or in the immediate vicinity of state waters unless adequate measures and controls are provided to ensure that those materials will not enter state waters. A non-toxic chemical additive would be considered deleterious if the taste of edible fish or drinking water is tainted.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for construction or human activities conducted that may result in discharges to surface water Applicable for CTP effluent where it discharges into Bunker Creek..
Idaho Water Quality Standards and Wastewater Treatment Requirements	IDAPA 58.01.02	Restrictions placed on the discharge of wastewater and on human activities that may adversely affect water quality in the waters of the state	Requires protection of state waters for appropriate beneficial uses; establishes state water quality standards for bacteria, dissolved oxygen, pH, temperature, dissolved gas, and total ammonia. Establishes numeric criteria for toxic substances for the protection of human health and aquatic life. Incorporates National Toxics rule (40 CFR 131.36) by reference.	2002 OU3 ROD	Idaho water quality standards (WQS) that were submitted to EPA prior to May 30, 2000, and any changes adopted by Idaho and approved by EPA between May 30, 2000 and the date of this ROD are applicable to point source discharges to Idaho surface water, where those point sources are established as part of the selected remedial action. WQS adopted by Idaho, but not yet submitted or approved by EPA that are more stringent than the standards previously submitted are relevant and appropriate to point source discharges to Idaho surface water, where those point sources are established as part of the selected remedial action. Note: OU3 is an interim action and does not establish final ARARs.
Idaho Water Quality Standards – South Fork Coeur d’Alene Subbasin	IDAPA §§58.01.02.284	Establishes aquatic life criteria for cadmium, lead, and zinc.	Water quality standards mandate the criterion maximum concentrations, and criterion continuous concentrations for cadmium, lead, and zinc. The regulation applies to the South Fork Coeur d’Alene River subbasin, units P-11 and P-13. In addition, the criteria for concentrations applies to all surface waters within the subbasin, except for natural lakes.	New standards established in March 2002. Not approved by EPA prior to the 2002 OU2 5-Year Review.	
Idaho Quality Standards	IDAPA §§58.01.11.200	Establishes water quality standards.	Standards for metals and PCBs have been revised since last ROD action (PCBs revised May 3, 2003). A new standard for zinc has been established at 5 mg/L.	New	
Total Maximum Daily Load (TMDL) for the Coeur d’Alene Basin	Technical Support Document, TMDL for Dissolved Cd, Pb, Zn, in Surface Waters of the Coeur d’Alene Basin (August, 2000)	Discharge of lead, cadmium, and zinc into the surface waters of the CDA basin.	Establishes total maximum daily load elements including water quality standards, loading capacity, natural background, loads, gross allocations, waste load allocation, load allocations, and margin of safety. Values established based on EPA’s 1995 National Toxics Rule. Dissolved Cadmium = 0.37 µg/L Dissolved Lead = 0.54 µg/L Dissolved Zinc = 32 µg/L	2000 OU2 5-Year Review	To be considered site-wide
Total Maximum Daily Load (TMDL) for the Coeur d’Alene Basin	Technical Support Document, TMDL for Dissolved Cd, Pb, Zn, in Surface Waters of the Coeur d’Alene Basin (August, 2000)	Establishes allowable pollutant loadings for specific water bodies.	Numeric criteria for the dissolved metals including cadmium, lead, and zinc are established (in pounds per day) to assure attainment of the surface water use designated by the state.	2001 OU2 Mine Water ROD Amendment	TBC for CTP effluent where it discharges into Bunker Creek.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Total Maximum Daily Load (TMDL) for the Coeur d'Alene Basin	TMDL was vacated in 2001 on procedural issue. Has not been reinstated as of March 2005.			New	TBC, not ARAR unless approved by EPA
Safety of Dams	Idaho Safety of Dams Rules (IDAPA 37.03.06)	Construction of dams	If the construction of a dam is needed during remedial activities, the size classification, risk category, and related safety requirements of a dam are determined by the Department of Water Resources.	2001 OU2 Mine Water ROD Amendment	Applicable for activities involving the construction or alteration of a dam as a result of stream diversions conducted under this remedy.
Stream Channel Alteration	Idaho Stream Channel Alteration Rules (IDAPA 37.03.07)	Regulation of stream channels.	The alteration of stream channels is regulated by the State of Idaho. Applicant is required to follow minimum standards set forth in regulations. These regulations are designed to protect fish and wildlife habitat, aquatic life, and water quality.	2001 OU2 ROD Amendment	Applicable site-wide for source control activities that involve the alteration of stream channels.
Stream Channel Alteration	Idaho Stream Channel Alteration Rules (IDAPA 37.03.07)	Regulation of stream channels.	The alteration of stream channels is regulated by the State of Idaho. Applicant is required to follow minimum standards set forth in regulations. These regulations are designed to protect fish and wildlife habitat, aquatic life, and water quality.	2002 OU3 ROD	Substantive requirements are applicable to elements of the selected remedy, such as stream bank stabilization, with potential to affect stream flows in the upper and lower basins. Note: OU3 is an interim action and does not establish final ARARs.
Within the Beds or Waters of Navigable Lakes of the State of Idaho	Idaho Lakes Protection Act regulations, IDAPA 20.03.04	Actions taken in navigable lakes or lake beds of the State of Idaho.	Requires consideration of protection of property, navigation, fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, and water quality of navigable lakes.	OU3	Applicable to remedial actions within the beds or waters of navigable lakes of the State of Idaho.
Water Quality Standards for Surface Waters of the State of Washington	Chapter 173-201A WAC	Standards for the protection of surface water quality.	For point source discharges to surface water in Washington State (with the exception of tribal lands). Standards provided for protection of aquatic life and human health. Human health standards incorporate the National Toxics Rule (40 CFR 131.36) by reference. Provides for short-term modifications of standards for specific water bodies during the performance of essential activities or to otherwise protect the public interest.	2002 OU3 ROD	Applicable to Selected Remedy to the extent the Selected Remedy results in a point source discharge to surface waters in Washington State (with the exception of tribal lands). Toxics standards for the protection of aquatic life, as submitted to EPA by May 30, 2000, and any changes adopted by Washington and approved by EPA between May 2000 and the date of this ROD are applicable to point source discharges to surface water. Note: OU3 is an interim action and does not establish final ARARs.
Activities Within 200 feet of a Shoreline of the State of Washington	Washington Shoreline Management Act and regulations, CH. 90.58 RCW; Ch. 173-18; Ch. 173-22, and Ch. 173-27 WAC	Protect the natural character of the streamway.	Applicable activities should be conducted to protect the natural character of the stream way. Shoreline protection measures (such as riprap) should be located, designed, and constructed to avoid the need for channelization of a stream flow, consistent with substantive provisions of the regulations.	2002 OU3 ROD	Applicable to activities within 200 feet of a shoreline of the State of Washington. Note: OU3 is an interim action and does not establish final ARARs.
Hydraulics Affecting Fish and Shellfish Habitat	Washington Department of Fish & Wildlife (WDF&W) Hydraulics Project Approval (Revised Code of Washington [RCW] 75.20.100) Ch. 220-110 WAC	Any work, construction, development or other activities that will use, divert, obstruct or change the natural flow or bed within the ordinary high water line of fresh waters.	Provides actions required for riverbank protection, temporary culvert construction, and dredging.	2002 OU3 ROD	Substantive requirements of this regulation are applicable to remedial action along and within the Spokane River that could affect fish life. Note: OU3 is an interim action and does not establish final ARARs

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
C. Other					
Coeur d'Alene Tribe Water Quality Standards – Freshwater Quality Standards, Chronic	Water Quality Standards for Surface waters of the Coeur d'Alene Tribe (August 2000)	Discharge of water into surface waters within the exterior boundaries of the Coeur d'Alene Reservation	Antimony = -- Arsenic = 190 µg/L Beryllium = -- Cadmium* = 1.0 µg/L Copper* = 11 µg/L Lead = 2.5 µg/L Zinc* = 100 µg/L Mercury = 0.012 µg/L PCBs = 0.014 µg/L * Freshwater aquatic life criteria for these metals are a function of hardness in the water column. Criteria presented are dissolved metal and correspond to a total hardness of 100 mg/L. Mercury criterion listed is for total recoverable.	2000 OU2 5-Year Review	To be considered site-wide. The Coeur d'Alene Tribe water quality standards are in draft form and won't be out for public review until after EPA approves TSA.
Coeur d'Alene Tribe Water Quality Standards – Human Health Criteria for Consumption of Organisms	Draft Water Quality Standards for Surface waters of the Coeur d'Alene Tribe (August 2000)	Discharge of water into surface waters within the exterior boundaries of the Coeur d'Alene Reservation	Antimony = 1573 µg/L Arsenic = 0.051 µg/L Beryllium = -- Cadmium = -- Copper = -- Lead = -- Zinc = -- Mercury = 0.15 µg/L PCBs = 0.000016 µg/L The Tribe's criteria are calculated based on a fish consumption rate of 17.8 grams per day instead of 6.5 grams per day as used by NTR. PCB criterion listed is for individual PCBs.	2000 OU2 5-Year Review	To be considered site-wide. The Coeur d'Alene Tribe water quality standards are in draft form and won't be out for public review until after EPA approves TSA.
II.B.2. Groundwater					
A. Federal					
Groundwater Monitoring	RCRA/HWMA 40 CFR §264, Subpart F 40 CFR §264, Subpart X	Established standards for detection and compliance monitoring.	Site-wide monitoring will accommodate specific groundwater monitoring requirements.	1992 OU2 ROD	Subpart F relevant and appropriate to Smelter Flats, Page Pond, CIA, MOA and Hillsides Subpart X relevant and appropriate to the Wetlands System.
B. State					
Groundwater Quality Rule	IDAPA 58.01.11	Establishes minimum requirements for the protection of groundwater through groundwater quality standards that are largely identical to MCLs and Secondary MCLs.	Provides for numeric groundwater quality standards based on protection of human health and aesthetic qualities.	2000 OU2 5-Year Review	Potentially relevant and appropriate site-wide.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Idaho Groundwater Quality Rule	IDAPA 58.01.11.200	Establishes primary and secondary constituent standards for the protection of groundwater.	Arsenic = 0.05 mg/L Copper (at tap) = 1.3 mg/L Lead (at tap) = 0.015 mg/L Mercury = 0.002 mg/L PCBs = 0.0005 mg/L Selenium = 0.05 mg/L Silver = 0.1 mg/L Zinc = 6 mg/L Nitrate = 10 mg/L	2001 OU2 5-Year Review	Potentially relevant and appropriate site-wide.
III. Soil/Sediment/Dust					
A. Federal					
Soil/Dust Lead Contamination Advisory	Centers for Disease Control's statement on childhood blood lead levels, 1985.	Removal of contaminated soils.	Lead in soil/dust appears to be responsible for blood lead levels in children increasing above background levels when the concentrations in the soil/dust exceed 500 – 1,000 ppm. This concentration is based upon the established CDC blood lead levels of 25 µg Pb/dl in children. When soil/dust lead concentrations exceed 500-1,000 ppm, blood lead levels in children are found to exceed 25 µg Pb/dl.	1992 OU2 ROD	To be considered Site –wide
Advisory Committee on Childhood Lead Poisoning Prevention	Centers for Disease Control's statement on Preventing Lead Poisoning in Young Children, 1991	Removal of contaminated soils.	New data indicate significant adverse effects of lead exposure in children at blood lead levels lower than previously believed to be safe. The 1985 intervention level of 25 µg/dL is, therefore, revised downwards to 10 µg/Pb/dL.	2000 OU2 5-Year Review	To be considered site-wide.
Advisory Committee on Childhood Lead Poisoning Prevention	Centers for Disease Control's statement on Preventing Lead Poisoning in Young Children, 1991. EPA Strategy for Reducing Lead Exposures, 1991.	Removal of contaminated soils.	Both the statement and the strategy address adverse effects of lead exposure to children. Goal is to reduce blood levels in children below 10 µg/dL concentration.	2002 OU3 ROD	Both the Statement and the Strategy are to be considered for remedial actions. Note: OU3 is an interim action and does not establish final ARARs.
USEPA Strategy for Reducing Lead Exposures	EPA October 31, 1990	Presents a strategy to reduce lead exposure, particularly to young children.	The strategy was developed to reduce lead exposures to the greatest extent possible. Goals of the strategy are to: 1) significantly reduce blood lead incidence above 10 µg Pb/dL in children; and 2) reduce the amount of lead introduced into the environment.	1992 OU2 ROD	To be considered site-wide.
Integrated Exposure Uptake Biokinetic Model for Lead in Children	PB 93 9635121.7-15-2	Development of blood lead standards	Model used to develop the 400 ppm lead screening level in OSWER Directive 9355.4-12	2002 OU3 ROD	To be considered. Note: OU3 is an interim action and does not establish final ARARs.
USEPA Interim Guidance Concerning Soil Lead Cleanup Levels at Superfund Sites	Office of Solid Waste and Emergency Response (OSWER) Directive #9355.4-01, September 1989	Establishes an interim soil cleanup level for total lead in residential settings.	This guidance adopts the recommendation contained in the 1985 CDC statement on childhood lead poisoning (an interim soil cleanup level for residential settings of 500-1,000 ppm total lead), and is to be followed when the current or predicted land use of contaminated areas is residential.	1992 OU2 ROD	To be considered site-wide
Revised U.S. EPA Interim Soil Lead Guidance for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites	Office of Solid Waste and Emergency Response (OSWER) Directive #9355.4-12, August	Establishes a streamlined approach for determining protective levels for lead in soil.	This revised guidance document recommends a 400 ppm screening level for lead in soil. For a typical child, the 400 ppm soil lead screening level corresponds to an estimated risk of no more than 5% exceeding the 10 µg/dL blood level using the IEUBK model.	2000 OU2 5-Year Review	To be considered Site Wide.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Revised U.S. EPA Interim Soil Lead Guidance for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites	Office of Solid Waste and Emergency Response (OSWER) Directive #9355.4-12, August 1994. OSWER Directive 9200.4-27P was issued in 1998 to clarify the 1994 policy of OSWER Directive 9355.4-12.	Establishes a streamlined approach for determining protective levels for lead in soil.	This revised guidance document recommends a 400 ppm screening level for lead in soil, describes how to develop site-specific remediation goals and a management strategy for lead contamination at sites with multiple lead sources.	2002 OU3 ROD	To be considered. Note: OU3 is an interim action and does not establish final ARARs.
Removal of Contaminated Soils	Surface Mining Control and Reclamation Act of 1977; 25 U.S.C. §§1201 et seq; 30 CFR Parts 816.11, .95, .97, .100, .102, .107, .111, .113, .114, .116	Removal of contaminated soils.	(.11) – Posting signs and markers for reclamation, including top soil markers and perimeter markers. (.95) – Stabilization of all exposed surface areas to effectively control erosion pollution attendant to erosion. (.97)– Use of best technology currently available to minimize disturbance, adverse impacts on fish, wildlife, related environmental values and enhancement of such if possible. (.100) – Contemporaneous reclamation including topsoil replacements and revegetation. (.102) – Achieve a post-action slope not exceeding angle of repose or such slope as is necessary to achieve a long-term static safety factor of 1.3 to prevent slides.	1992 OU2 ROD Revised July 2004	Relevant and appropriate site-wide.
Controlling Contamination	Best Management Practices for Soils Treatment Technologies, (EPA Office of Solid Waste and Emergency Response [OSWER], 1997)	Guidance for controlling contamination.	Provides technologies for controlling cross-media transfer of contaminants during materials handling activities.	2002 OU3 ROD	To be considered. Note: OU3 is an interim action and does not establish final ARARs.
B. State					
Fugitive Dust	Fugitive Dust, (IDAPA 16.01.1251- 16.01.1252; renumbered to 58.01.01.650-651), 1993	Emission of airborne particulate matter.	The remedial action will be designed to take all reasonable precautions to prevent particulate matter from becoming airborne including but not limited to, as appropriate, the use of water or chemicals as dust suppressants, the covering of trucks and the prompt removal and handling of excavated materials.	1992 OU2 ROD	Applicable. No location given
Idaho Rules for Control of Fugitive Dust	IDAPA 58.01.01.650-651	Provides for control of fugitive dust.	Require reasonable precautions be taken to prevent particulate matter from becoming airborne, including using water or chemicals to control dust, covering trucks for transporting materials, and promptly removing excavated materials.	2002 OU3 ROD	Applicable to soil removal operations which may generate fugitive emissions. Note: OU3 is an interim action and does not establish final ARARs.
Disposal of Solid Waste	Washington Model Toxics Control Act - Solid Waste Management Act regulations, Ch. 173-304 WAC	Disposal of solid waste	Regulations set soil remediation levels for protection of human health and the environment.	2002 OU3 ROD	Applicable to the remediation of beach sites between the State line and the Upriver dam. Note: OU3 is an interim action and does not establish final ARARs.
Surface Mining Operations	Idaho Exploration and Surface Mining regulations (IDAPA 20.03.02)	Regulation surface mine operations.	Regulations apply to activities where minerals are extracted from the ground. “Minerals” include clay, stone, sand, gravel, “and any other similar, solid material or substance of commercial value to be excavated from natural deposits on or in the earth.” Best management practices are listed for nonpoint source sediment control, clearing and grubbing, placement of topsoil conducive to the growth of vegetation, backfilling and grading, and erosion control.	2002 OU3 ROD	Applicable to surface mining operations. Substantive requirements apply to borrow sources for soil, gravel, and similar clean materials for residential yards, landfill caps, and other areas requiring fill or barriers to underlying contamination. IDAPA 20.03.02.140 may be relevant and appropriate to placement and consolidation of contaminated material generated by cleanup activity. Note: OU3 is an interim action and does not establish final ARARs.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
C. Other					
Risk Assessment Data Evaluation Report (RADER) for the Non-populated Areas of the Bunker Hill Superfund Site	Technical Enforcement Contract Work Assignment C10002 Prepared by: Jacobs Engineering Group, Inc. and TerraGraphics, Inc.	Evaluates baseline health risk due to current site exposures and established contaminant levels in environmental media at the site for the protection of public health.	The ARARs for soils may not provide adequate protection to human health; therefore, a risk assessment approach using these guidances should be used in determining cleanup levels.	1992 OU2 ROD	To be considered site-wide.
IV. Wastes/Debris/Bldg. Materials					
A. Federal					
Toxic Substance Control Act	40 CFR §761, Subpart G	Establishes a PCB spill policy and regulates PCBs at concentrations of 50 ppm or greater, procedures for storage and disposal of PCBs, and PCB-containing materials.	PCB-contaminated material must be managed and disposed of at Toxic Substances Control Act (TSCA) facilities.	1992 OU2 ROD	Applicable for Smelter Complex and MOA
Toxic Substance Control Act – PCB Megarule	40 CFR §761.125	Spills involving 1 pound or more by weight are required to be reported to the National Response Center.	PCB-contaminated material must be managed and disposed of at Toxic Substances Control Act (TSCA) facilities.	Revised June 29, 1998	Requirement changed subsequent to 1992 OU2 ROD.
“A Guide on Remedial Actions at Superfund Sites with PCB Contamination”	U.S. EPA Directive 9355.4-01 FS	Establishes guidelines for management and remediation of PCBs/PCB- contaminated material.		1992 OU2 ROD	To be considered for Smelter Complex and MOA
Land Disposal Restrictions (LDRs)	RCRA/HWMA 40 CFR §268	LDRs place specific restrictions (concentration or treatment) on RCRA hazardous wastes prior to their placement in a land disposal unit.	Relevant and appropriate LDR requirements will be met if any material accumulations are treated ex situ.	1992 OU2 ROD	Relevant and appropriate to Mine Operations Area (MOA) and Smelter Complex.
RCRA Bevill Exemption	RCRA Section 3001(b)(3)(A)(ii), 42 USC 6921(a)(3)(A)(ii), 40 CFR 261.4(b)(7)	Management or processing of certain mining wastes	The Bevill exclusion provides that “solid waste from the extraction, beneficiation and processing of ores and minerals (including coal), including phosphate rock and overburden from the i=ining of uranium ore [are not hazardous wastes].”	2001 OU2 Mine Water ROD Amendment	Applicable to AMD and sludge generated from treatment of AMD.
Hazardous Waste	RCRA Subtitle C: Bevill Amendment –42 USC Section 6921(b)(3)(A and IDAPA 58.01.05.	Management or processing of certain mining wastes.	Solid wastes from the extraction, beneficiation, and some processing of ores and minerals are excluded from the RCRA Subtitle C requirements for managing hazardous wastes.	2002 OU3 ROD	.Elements of Subtitle C may be relevant and appropriate to ensure the safe management of some solid wastes, including principal threat materials (e.g., metal concentrates). RCRA subtitle C elements that may be relevant and appropriate may include selected portions of the requirements for design and operation of a hazardous waste landfill (40 CFR Part 264, IDAPA 58.01.05.009) and selected portions of the requirements for landfill closure and post-closure care (40 CFR Part 264 Subpart G, IDAPA 58.01.06.012-.013) Note: OU3 is an interim action and does not establish final ARARs.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Hazardous Waste	RCRA Subtitle C – Hazardous Waste Identification and Listing of Hazardous Waste (40 CFR 261) Standards Applicable to Generators of Hazardous Waste (40 CFR 262)	For generators of solid waste.	A solid waste is hazardous if it exhibits any of the characteristics of a hazardous waste; i.e., ignitability, corrosivity, reactivity, and toxicity as determined by a toxicity characteristic leaching procedure (TCLP). If a waste is deemed to be hazardous, then substantive requirements of 40 CFR 262 Generator Requirements are applicable.	2001 OU2 Mine Water ROD Amendment	Applicable to any hazardous wastes (other than Bevill-exempted waste) generated as part of the treatment plant operation.
Hazardous Waste	RCRA Subtitle C – Hazardous Waste Identification and Listing of Hazardous Waste (40 CFR 261) Standards Applicable to Generators of Hazardous Waste (40 CFR 262)	For generators of solid waste.	A solid waste is hazardous if it exhibits any of the characteristics of hazardous waste. If a waste is deemed to be hazardous, then substantive requirements of 40 CFR 262 Generator Requirements are applicable. Subtitle C also provides treatment standards for debris contaminate with hazardous waste (“hazardous debris”)	2002 OU3 ROD	Applicability depends on whether the wastes are managed within the Area of Contamination (AOC) (55 FR 8760; Mar. 8, 1990). Applicable requirements of RCRA Subtitle C or state equivalent may be satisfied by off-site disposal (40 CFR 300.440) Hazardous debris requirements applicable for debris contaminate with hazardous waste that will be managed outside the AOC. Note: OU3 is an interim action and does not establish final ARARs.
Hazardous Materials Transport	Federal Department of Transportation Hazardous Materials Transportation Act (49 CFR Parts 171 to 180)	Transportation of hazardous wastes offsite.	The movement of hazardous materials on public roadways must follow the placarding, packaging, documentation, emergency response, and other requirements of this regulation.	2001 OU2 Mine Water ROD Amendment	Applicable for the transportation of any hazardous materials on public thoroughfares.
Hazardous Materials Transport	Hazardous Materials Transportation Act (49 CFR Parts 171 to 180)	Movement of hazardous materials.	The movement of hazardous materials on public roadways must follow the placarding, packaging, documentation, emergency response, and other requirements of this regulation.	2002 OU3 ROD	Applicable for the transportation of any hazardous materials on public thoroughfares. Note: OU3 is an interim action and does not establish final ARARs.
B. State					
Management of Hazardous Waste	I.C. Sections 39-4401 et seq., IDAPA Sections 16.01.5000 et seq.	Generation, transportation, storage or disposal of hazardous waste.	The remedial action will be designed to manage any hazardous waste that may be generated by the remedial action in accordance with the relevant and appropriate generation, transportation, storage, and disposal requirements for such waste. Onsite actions are exempt from some requirements, and permits are not required for onsite activities.	1992 OU2 ROD	Relevant and appropriate (no location given)
Hazardous Waste	Idaho Rules and Standards for Hazardous Waste-Management of Hazardous Waste (IDAPA 58.01.05 et. seq.)	Management of generated hazardous waste.	Hazardous wastes that are generated must be managed in accordance with the applicable generation and transportation, storage, and disposal requirements. On-site actions are exempt from some requirements and permits are not required.	2001 OU2 Mine Water ROD Amendment	Applicable to any hazardous waste (other than Bevill-exempted waste) generated as part of the CTP operation.
Land Disposal Restrictions	IDAPA 16.01.5011	LDRs place specific restrictions (concentration or treatment) on RCRA hazardous wastes prior to their placement in a land disposal unit.	Relevant and appropriate LDR requirements will be met if any material accumulations are treated ex situ.	1992 OU2 ROD	Relevant and appropriate (no location given)

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Management of Solid Waste	IDAPA Sections 16.01.5000 et seq. (renumbered to Idaho Solid Waste Management Rules and Standards [IDAPA 58.01.06])	Management of solid waste including storage, collection, transfer, transport, processing, separation, treatment and disposal.	The remedial action will be designed to manage solid waste to prevent health hazards, public nuisances and pollution to the environment in accordance with the applicable solid waste management requirements. No permit is required for onsite actions.	1992 OU2 ROD	Applicable (no location given.)
Solid Waste Management	Idaho Solid Waste Management Rules and Standards (IDAPA 58.01.06)	Management criteria for solid waste	Requires that all solid waste be managed to prevent human health hazards, public nuisances, or pollution of environment.	2001 OU2 Mine Water ROD Amendment	Applicable to the management and disposal of sludge generated by the treatment process.
Disposal of Dangerous Solid Waste.	Washington Hazardous Waste Management Act (Dangerous Waste) regulations, Ch. 173-303 WAC	Regulating disposal of dangerous waste.	Provide requirements for the identification, accumulation, transport, treatment, and disposal of dangerous (including federally hazardous) wastes. (The Bevill Exemption from RCRA Subtitle C requirements does not apply in the State of Washington.)	2002 OU3 ROD	Applicable to remedial actions in the State of Washington along the Spokane River. Note: OU3 is an interim action and does not establish final ARARs.
Disposal of Solid Waste	Washington Model Toxics Control Act - Solid Waste Management Act regulations, Ch. 173-304 WAC	Disposal of solid waste	Provides minimum functional standards for solid waste handling.	2002 OU3 ROD	Applicable for the management and disposal of soils and sediments that are not State of Washington dangerous wastes and are excavated from the Spokane River beaches within the State of Washington. Note: OU3 is an interim action and does not establish final ARARs.
Disposal of Solid Waste	Washington Solid Waste Handling Standards, Ch. 173-350 WAC (February 10, 2003)	Solid waste management	Washington State enacted a new rule to accommodate all of the proposed changes to 173-304 WAC. New rule applies to new facilities, and will be phased in at existing facilities.	New	
C. Other					
Remedial Guidelines	Mine and Mill Waste Remedial Guidelines and Best Management Practices (Coeur d'Alene Basin Restoration Project)	Guidelines for design and implementation of selected response actions.	Consider a number of factors and techniques for protecting water quality, fish, and wildlife habitat, while minimizing potential for human exposure.	2002 OU3 ROD	To be considered. Note: OU3 is an interim action and does not establish final ARARs.
V. Siting, Design and Management of Facilities					
A. Federal					
Site Located within a Floodplain	Protection of Floodplains, Executive Order 11988; 40 CFR 6, Appendix A.	Remedial action will take place within a 100-year floodplain.	The remedial action will be designed to avoid adversely impacting the floodplain wherever possible to ensure that the action's planning and budget reflects consideration of the flood hazards and floodplain management.	1992 OU2 ROD	Applicable to West Page Swamp, Smelterville Flats, and Wetlands System.
For property Located within a Floodplain	Protection of Floodplains, Executive Order 11988; 40 CFR 6, Appendix A.	Remedial action will take place within a 100-year floodplain.	Requires federal agencies to evaluate the potential effects of action they may take in a floodplain to avoid the adverse impacts associated with direct and indirect development of a floodplain.	2001 OU2 Mine Water ROD Amendment	Applicable side-wide for construction activities that occur within the 100-year floodplain.
Protection of Floodplains	Executive Order 11988, 40 CFR 6.302(b), and Appendix A.	Remedial action will take place within a 100-year floodplain	Federal agencies are required to evaluate the potential effects of actions that take place in floodplains and to avoid adverse impacts.	2002 OU3 ROD	Applicable to remedial actions within the floodplain of the Coeur d'Alene River and its tributaries. Note: OU3 is an interim action and does not establish final ARARs.

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Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Structures in Waterway	Rivers and Harbors Act 33 CFR §320-330	Placement of structures in waterways is restricted to pre-approval of U.S. Army Corps of Engineers.	The remedial action will comply with these requirements.	1992 OU2 ROD	Applicable site-wide.
Structures in Waterway	Rivers and Harbors Act 33 CFR Parts 320-330, Section 10 regulations.	Placement of structures in waterways is restricted to pre-approval of U.S. Army Corps of Engineers.	Prohibit unauthorized obstruction or alteration of navigable waters.	2002 OU3 ROD	Applicable to activities in or near navigable waters. Note: OU3 is an interim action and does not establish final ARARs.
Disposal of Solid Waste	Resource Conservation and Recovery Act (RCRA) 42 U.S.C. 6901 et seq; 40 CFR 257	Maintenance of a facility at which solid wastes are disposed.	Facility or practices in floodplains shall not: - restrict flow of basic flood, reduce the temporary water storage capacity of the floodplain or otherwise result in a wash-out of solid waste. - cause or contribute to taking of any endangered or threatened species. - result in the destruction or abuse of critical habitat. - cause discharge of pollutants into waters of the U.S. in violation of an NPDES permit, -cause discharge of dredged or fill material into waters of the U.S., -contaminate underground drinking source beyond facilities' boundary, - pose a hazard to the safety of persons or property from fire, -allow uncontrolled public access so as to expose the public to potential health and safety hazards. The concentration of explosive gases generated at the facility shall not exceed: 1) 25% or the lower explosive limit for the gases in facility structures; 2) the lower explosive limit for the gases at the boundary.	1992 OU2 ROD	Applicable to CIA, Page Pond, and solid waste landfills
Solid Waste Disposal Facility Operation	RCRA Subtitle D Part 257, Criteria for Classification of Solid Waste Disposal Facilities and Practices (42 USC 6901 et seq., 40 CFR 257)	Solid waste disposal facilities on the site	Maintenance of a facility at which solid waste open disposal occurs. Criteria established to determine which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on human health or the environment. Requirements include the following: (1) Facility or practices shall not cause or contribute to taking of any endangered or threatened species; (2) Facility or practices shall not result in the destruction or abuse of critical habitat; (3) Facility or practice shall not cause discharge of pollutants into waters of the US in violation of a NPDES permit; and (4) Facility or practices shall not cause discharge of dredged or fill material into waters of the United States.	2001 OU2 Mine Water ROD Amendment	Applicable for sludge disposal facilities constructed within the 21-square mile area.
Solid Waste Disposal Facilities and Practices	40 CFR Part 257, Subpart A	Management of a solid waste disposal facility	Facilities in floodplains must not restrict the flow of the base flood, nor reduce the temporary water storage capacity of the floodplain, nor result in washout of solid waste; and not cause or contribute to the taking of any endangered or threatened species. Facilities must not cause a discharge of pollutants into waters of the U.S. that violates the requirements of the National Pollutant Discharge Elimination System and must not contaminate an underground drinking water source beyond the solid waste boundary.	2002 OU3 ROD	Applicable for management and disposal of material generated by cleanup activity pursuant to the Selected Remedy in this ROD. Note: OU3 is an interim action and does not establish final ARARs.
Municipal Solid Waste Landfills	RCRA Subtitle D Part 258 (42 USC 6901 et seq., 40 CFR 258)	Design and operation of solid waste facility	Establishes minimum design and operational requirements for municipal solid waste disposal facilities to ensure protection of human health and the environment.	2001 OU2 Mine Water ROD Amendment	Relevant and appropriate for locating, designing, operating and closing sludge disposal facilities constructed within the 21-square mile area.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Closure Requirements	RCRA/Hazardous Waste Management Act (HWMA) 40 CFR §264, Subpart G	Closure of hazardous waste repositories must meet protective standards.	Regulations to minimize contaminant migration, provide leachate collection, and prevent contaminant exposure will be met	1992 OU2 ROD	Relevant and appropriate to Smelter Complex
Closure Requirements	RCRA/Hazardous Waste Management Act (HWMA) 40 CFR §264, Subpart G	Closure of hazardous waste repositories must meet protective standards.	Protectiveness will be achieved through capping and institutional controls	1992 OU2 ROD	Relevant and appropriate to CIA, Page Pond
Treatment, Storage, or Disposal of Hazardous Waste	40 CFR 264.13, .14	The treatment, storage, or disposal of RCRA-regulated wastes.	Prevent unknowing entry and minimize the possibility of unauthorized entry of persons or livestock to the active portion of the facility. Includes: artificial or natural barrier completely surrounding the active area, a means to control entry, a sign stating “Danger, Unauthorized Personnel Keep Out.”	1992 OU2 ROD	Relevant and Appropriate for CIA, Page Pond, MOA, and Smelterville Flats.
Landfill Design and Construction	RCRA/HWMA 40 CFR §264, Subpart N	Hazardous waste landfills must meet minimum design standards.	Protectiveness will be achieved through capping and institutional controls.	1992 OU2 ROD	Relevant and appropriate to Smelter Complex.
Guidance for Mine Waste Repository Management	Guidelines for Mine Tailings Repositories Coeur d’Alene Basin Project, April 27, 1995 Design and Construction of RCRA/Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Final Covers, EPA/625/4-91/025, May 1991	Provides guidance for the management of a mine waste repository.	Guidelines for location, design, construction and management of a mine waste repository. Guidelines for the design and construction of these covers.	2002 OU3 ROD	To be considered. Note: OU3 is an interim action and does not establish final ARARs.
B. State					
Siting of Hazardous Waste Disposal Facility	I.C. §§39-5801 et seq	Siting of hazardous waste disposal facility.	The remedial action will be designed to satisfy some of the technical criteria in the Idaho Hazardous Waste Siting Management Plan as adopted by the Idaho Legislature. Consideration will be given in remedy design to general considerations referenced by the Hazardous Waste Facility Siting Act. However, a siting license for an onsite hazardous waste disposal facility is not required.	1992 OU2 ROD	Relevant and appropriate.
Institutional Controls	Idaho Land Remediation Rules (IDAPA 58.01.18.027)	Containing residual contamination.	Institutional controls may be part of voluntary remediation under specified circumstances. Institutional controls may be needed in instances where residual concentrations of chemicals remain in excess of risk or regulatory levels in order to reduce or eliminate contact with contaminated media.	2001 OU2 Mine Water ROD Amendment	Relevant and appropriate for actions conducted under the remedy that results in remaining residual concentrations of chemicals in excess of regulatory levels.
Institutional Controls	Idaho Land Remediation Rules (IDAPA 58.01.18.027)	Containing residual contamination.	These provisions describe a range of institutional controls, including legal use restrictions that may be available in certain situations. Institutional controls may be part of voluntary remediation under specified circumstances.	2002 OU3 ROD	Applicable to persons who wish to enter voluntary remediation agreements with the State of Idaho. However, institutional control provisions are relevant and appropriate for managing waste in locations within the Basin where metals concentrations remain above risk or regulatory levels after remediation. Note: OU3 is an interim action and does not establish final ARARs.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Solid Waste	Idaho Solid Waste Management Rules and Standards (IDAPA 58.01.05)	Waste Management and Repository Design	Tier II and Tier III non-municipal solid waste landfill siting, design, operation and closure requirements where leachate or gas may be formed.	2002 OU3 ROD	Tier II requirements may be relevant and appropriate for the design, operation, and closure of mine-waste repositories in the upper and lower Coeur d'Alene Basin. Sections of Tier III requirements may be relevant and appropriate to repositories that contain principal threat materials (e.g. metal concentrates). Note: OU3 is an interim action and does not establish final ARARs.
VI. Fish and Wildlife					
A. Federal					
Area Containing Fish and Wildlife Habitat	Fish and Wildlife Conservation Act of 1980; 16 U.S.C. 2901; 50 CFR Part 83 Fish and Wildlife Coordination Act, 16 U.S.C. 661 et seq Migratory Bird Act, 16 U.S.C. 703	Activity affected wildlife and non-game fish.	Remedial action will conserve and promote conservation of non-game fish and wildlife and their habitats.	1992 OU2 ROD	Applicable site-wide.
Area Containing Fish and Wildlife Habitat	Fish and Wildlife Conservation Act of 1980; 16 U.S.C. 2901 et seq.; 50 CFR Part 83	Activity affected non-game fish and wildlife.	Federal departments and agencies required to use their statutory and administrative authority to conserve and promote conservation of non-game fish and wildlife and their habitats. Non-game fish and wildlife are defined as fish and wildlife that are not taken for food or sport, that are not endangered or threatened, and that are not domesticated.	2001 OU2 Mine Water ROD Amendment	.Applicable site-wide for remedial actions that may impact habitat for non-game fish and wildlife.
Area Containing Fish and Wildlife Habitat	Fish and Wildlife Coordination Act, 16 U.S.C. 661 et seq., and 40 CFR 6.302 (g)	Remedial action that may impact streams or water bodies.	Requires consultation with USFWS (and State of Idaho Department of Fish and Game) when any federal department or agency proposes or authorizes any modification of stream or other water body greater than 10 hectares; requires adequate provisions for protection of fish and wildlife resources.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for remedial actions that impact streams.
Site Located in an Area of Critical Habitat Upon Which Endangered or Threatened Species Depend.	Endangered Species Act of 1973; 16 U.S.C. 1531-1543, 50 CFR Parts 17, 401; 40 CFR 6.302(b) Federal Migratory Bird Act; 16 U.S.C. 703-712	Determination of presence of endangered or threatened species	The remedial action will be designed to conserve endangered or threatened species and their habitat, including consultation with the Department of Interior if such areas are affected.	1992 OU2 ROD	Applicable site-wide.
Site Located in an Area of Critical Habitat Upon Which Endangered or Threatened Species Depend.	Endangered Species Act; 16 U.S.C. 1531 et seq., 50 CFR 402; 40 CFR 6.302(b)	Determination of presence of endangered or threatened species	Protects endangered or threatened species and their habitat. If endangered or threatened species are in the vicinity of remediation work, U.S. Fish and Wildlife Service must be consulted and the remediation activities must be designed to conserve endangered or threatened species and habitats.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for any endangered or threatened species or associated habitat identified during the performance of remedial actions. EPA has consulted with USFWS and NMFS. Gray wolves (nonessential experimental population) were the only listed threatened or endangered species with the probability of occurring in or transitioning through the project area. In a biological assessment, a determination was made of no effect to gray wolves.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Site Located in an Area of Critical Habitat Upon Which Endangered or Threatened Species Depend.	Endangered Species Act; 16 U.S.C. 1531 et seq., 50 CFR Parts 17, 402;	Determination of presence of endangered or threatened species	Unlawful to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” any federally-designated threatened or endangered species. Such species may include bull trout, bald eagle, lynx, and gray wolf. EPA will consult with the US fish and Wildlife Service to ensure that remedial actions are conducted in a manner to avoid adverse habitat modification and jeopardy to the continued existence of threatened and endangered species, if any, present in the vicinity of the remedial action.	2002 OU3 ROD	Applicable to activities of the selected Remedy (for example, soil removal or repository construction) that could affect federally-designated threatened or endangered species that may be present within the Coeur d’Alene Basin. Note: OU3 is an interim action and does not establish final ARARs.
Conservation of Migratory Birds	Responsibilities of Federal Agencies to Protect Migratory Birds, Executive Order 13186 (66 FR 3853, January 17, 2001)	Conservation of migratory birds	Encourages federal agencies to integrate migratory bird conservation principles into agency plans and activities. Such efforts may include preventing or abating pollution for the benefit of migratory birds or restoring or designing migratory bird habitat.	2002 OU3 ROD	Substantive elements are to be considered for the implementation of the selected remedial actions. Note: OU3 is an interim action and does not establish final ARARs.
Conservation of Migratory Birds	Migratory Bird Treaty Act (MBTA), 16 USC 703 et seq.,	Protect migratory birds by avoiding taking or killing of protected species.	Unlawful to “hunt, take, capture, kill” or take various other actions adversely affecting a broad range of migratory birds, including tundra swans, hawks, falcons, songbirds, without prior approval by the USFWS. The mortality of migratory birds due to ingestion of contaminated sediment is not a permitted take under the MBTA.	2002 OU3 ROD	MBTA and its implementing regulations are relevant and appropriate for protecting migratory bird species identified within the Coeur d’Alene Basin. Selected Remedies will be carried out in a manner that avoids taking or killing of protected migratory bird species, including individual birds or their nests or eggs. Note: OU3 is an interim action and does not establish final ARARs.
B. State					
Endangered Species	IC Section 36-201	Determination of presence of endangered or threatened species.	Remediation will be designed to conserve endangered or threatened species, and their habitat.	1992 OU2 ROD	Relevant and appropriate site-wide.
For Property with Wildlife	Idaho Classification and Protection of Wildlife (Idaho Statute 36-201 and IDAPA 13.01.06)	For the protection of wildlife.	The Idaho Department of Fish and Game classifies wildlife as game, protected non-game, endangered, threatened, and species of special concern. None of the protected non-game, species of special concern, threatened, or endangered species may be taken or possessed, except as provided by Idaho Fish and Game.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for any remedial action that may affect or take designated wildlife species.
For Property with Wildlife	Idaho Classification and Protection of Wildlife (Idaho Statute 36-201 and IDAPA 13.01.06)	For the protection of wildlife.	The Idaho Department of Fish and Game classifies wildlife as game, protected non-game, endangered, threatened, and species of special concern. None of the protected non-game, species of special concern, threatened, or endangered species may be taken or possessed, except as provided by Idaho Fish and Game.	2002 OU3 ROD	Relevant and appropriate to remedial activities that could affect wildlife species protected by the State of Idaho. Note: OU3 is an interim action and does not establish final ARARs.
Protection of Wildlife	Washington Game Code, Ch. WAC 232-12	Protection of wildlife.	Provides a list of state endangered, threatened, sensitive and other protected species.	2002 OU3 ROD	Relevant and appropriate to beach cleanup activities. Note: OU3 is an interim action and does not establish final ARARs
VII. Cultural Resources					
A. Federal					
Site Within an Area Where Action May Cause Irreparable Harm, Loss, or Destruction of Artifacts.	Archaeological and Historic Preservation Act; 16 U.S.C. 469,. 40 CFR 6.301(c),	Property within area of the Site contains historical and archaeological data.	The remedial action will be designed to minimize the effect on historical and archaeological data.	1992 OU2 ROD	Applicable site-wide.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Property Within the Area of the Site that May Contain Historical and Archaeological Data.	Archaeological and Historic Preservation Act; 16 U.S.C. 469, et. seq., 40 CFR 6.301(c)	Establishes procedures for preservation of historical and archaeological data that might be destroyed through alteration of terrain as a result of federal construction project or a federally licensed activity or program.	Presence or absence of such data on the site must be verified. If historical or archaeological artifacts are present in remediation areas, the remedial actions must be designed to minimize adverse effects on the artifacts.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for any eligible historical and archaeological artifacts identified during the performance of remedial actions.
For Historic Properties.	Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-ii; 43 CFR 7)	For historic properties or landmarks within areas of the site that may contain historical and archaeological data.	Steps must be taken to protect archaeological resources and sites that are on public and Indian lands and to preserve data. Investigators of archaeological sites must fulfill professional requirements. Presence of archaeological sites are to be identified.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for any eligible historical and archaeological artifacts identified during the performance of remedial actions.
For Historic Properties.	Archaeological Resources Protection Act (16 U.S.C. Section 470aa et seq.; 43 CFR Part 7)	For historic properties or landmarks within areas of the site that may contain historical and archaeological data.	Prohibits the disturbance or removal of archaeological resources on public and Indian lands without a permit. Requires that an archaeological investigation must be conducted by a professional archaeologist. Federal agencies must identify possible effects of proposed remedial activities on historic properties (cultural resources). Steps must be taken to protect archaeological resources and sites that are on public and Indian lands. Presence of archaeological sites are to be identified.	2002 OU3 ROD	Applicable for the conduct of any selected remedial actions that may result in ground disturbance. Note: OU3 is an interim action and does not establish final ARARs.
Historic Project Owned or Controlled by a Federal Agency	National Historic Preservation Act; 16 U.S.C. 470 et seq; 40 CFR 6.301(b); 36 CFR Part 800	Property within areas of the Site is included in or eligible for the National Register of Historic Places.	The remedial action will be designed to minimize the effect on historic landmarks and properties.	1992 OU2 ROD	Applicable site-wide.
Preservation of Historic Sites, Historic Project Owned or Controlled by a Federal Agency.	National Historic Preservation Act; 16 U.S.C. 470 et seq; 40 CFR 6.301(b); 36 CFR Part 800 Executive Order 11593 National Historic Landmarks Program (36 CFR Part 65) National Register of Historic Places (36 CFR Part 60)	Identify possible effects of proposed remedial activities on historic properties.	Federal agencies must identify possible effects of proposed remedial activities on historic properties (cultural resources). If historic properties or landmarks eligible for, or included in, the National Register of Historic Places exist within remediation areas, remediation activities must be designed to minimize the effect on such properties or landmarks.	2001 OU2 Mine Water ROD Amendment	While the Bunker Hill Superfund site has not been designated as having historic value to warrant inclusion in the National Register of Historic Places, the Act is applicable if any eligible structures are encountered during the performance of remedial actions.
Preservation of Historic Sites, Historic Project Owned or Controlled by a Federal Agency.	National Historic Preservation Act; 16 U.S.C. 470f ; 36 CFR Parts 60, 63, and 800;	Minimize adverse effects of proposed remedial activities on historic properties.	Required to consider possible effects on historic sites or structures of actions proposed for federal funding or approval. If potential adverse effect is identified, an evaluation of alternatives to “avoid, minimize, or mitigate” the impact, in consultation with the State Historic Preservation Office (SHPO). Unavoidable impacts on historic sites or structures may be mitigated through such means as taking photographs and collecting historical records.	2002 OU3 ROD	Applicable to selected remedial activities such as mill building demolition, and soil excavation which could disturb historical sites or structures. Note: OU3 is an interim action and does not establish final ARARs.
Native American Graves	Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq; 43 CFR 10)	To protect Native American burial sites and funerary objects.	If Native American graves are discovered within remediation areas, project activities must cease and consultation must take place between the Department of Interior and the affected tribe.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for any cultural resources found during the performance of remedial actions.

TABLE 1-1
Bunker Hill ARARs¹
Bunker Hill 5-Year Review ARARs

Regulation	Citation	Prerequisite	Requirement	ROD Citations ²	Prior ARAR Determination from ROD Documents
Native American Graves	Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. Section 3001 et seq; 43 CFR 10)	To protect Native American burial sites and funerary objects.	NAGPRA. And implementing regulations are intended to protect Native American graves from desecration through the removal and trafficking of human remains and “cultural items” including funerary and sacred objects. Regulations require that if such items are inadvertently discovered during excavation, the excavation must cease and the affiliated tribes must be notified and consulted.	2002 OU3 ROD	Applicable to ground-disturbing activities such as soil grading and removal. Note: OU3 is an interim action and does not establish final ARARs.
Native American Sacred Sites	American Indian Religious Freedom Act, 42 U.S.C. §1996 et seq.	Protects religious, ceremonial, and burial sites and the free practice of religions by Native American groups.	If sacred sites are discovered in the course of soil disturbances, work will be stopped and the Coeur d’Alene and/or Spokane Tribes will be contacted. The statute has no implementing regulations; following the NAGPRA process should meet with the intent of the law.	2002 OU3 ROD	Applicable to soil excavation in areas of the Coeur d’Alene Basin. Note: OU3 is an interim action and does not establish final ARARs.
B. State					
Preservation of Historic Sites.	Idaho Preservation of Historical Sites (Idaho Statute 67-4601to 4619)	Property within areas of the Site is included in the National Register of Historic places.	The remedial action will be designed to minimize the effect of historic landmarks.	1992 OU2 ROD	Applicable site-wide.
For Property Within Area of the Site that May Contain Historical and Archaeological Data.	Idaho Preservation of Historical Sites (Idaho Statute 67-4601 et seq) and Idaho State Historical Society (Idaho Statute 67-4101 et seq)	For property within area of the site that may contain historical and archaeological data.	Covers historical sites and historical districts within the State of Idaho and the excavation of archaeological resources. The State Historical Society publishes the National Register of Historic Places for Idaho.	2001 OU2 Mine Water ROD Amendment	Applicable site-wide for any eligible structures identified during the performance of remedial actions.